PATENT
Docket No. 55090US002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant(s):	Eric E. RICE et al.	Group Art Unit:	1772
Serial No.:	09/929,417	Examiner:	Patricia L. Nordmeyer
Confirmation No.:	1221		
Filed:	14 August 2001		
For:	COMPOSITE PAVEMENT MARKINGS		

APPELLANTS' BRIEF ON APPEAL

Commissioner for Patents
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P.O. Box 1450
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Sir:

This Brief is presented in support of the Appeal filed 19 March 2004, from the final rejection of claims 1-24 of the above-identified application under 37 C.F.R. §§1.113 and 1.191.

This Brief is being submitted in triplicate, as set forth in 37 C.F.R. § 1.192(a). Please charge Deposit Account No. 13-4895 the fee for filing this Brief under 37 C.F.R. § 1.17(f).

I. REAL PARTY IN INTEREST

The real party in interest of the above-identified patent application is the assignee, 3M Innovative Properties Company.

II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known to Appellants' Representatives which would directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-24 are pending and are the subject of this Appeal. Claims 25-31 have been withdrawn from consideration. All of claims 1-31 are presented in Appendix I.

IV. STATUS OF AMENDMENTS

A Restriction Requirement dated 24 March 2003 was issued. Appellants elected Group I, claims 1-24, in response to the Restriction Requirement.

A non-final Office Action was mailed on 15 May 2003. Claims 1-3, 7-9, 14, and 23-24 were rejected under 35 U.S.C. § 102(b). Claims 4-6, 10-12, 13, and 15-22 were rejected under 35 U.S.C. § 103(a). Claims 25-31 were withdrawn from consideration in view of the election of Group I in response to the Restriction Requirement.

An Amendment and Response was filed by Appellants (dated 15 September 2003) in the above-identified application in response to the non-final Office Action dated 15 May 2003.

A Final Office Action was mailed on 20 October 2003. The § 102(b) rejection and the § 103(a) rejection of claims 4-6, 13, 15-18, and 21-22 were withdrawn. However, the rejections under § 103(a) of claims 10-12, and 19-21 from the non-final Office Action of 15 May 2003 were maintained. Also, a new § 103(a) rejection of claims 1-9, 13-18, and 21-24 was presented.

A Response was filed on 19 February 2004 in the above-identified application in response to the Final Office Action dated 20 October 2003.

A Notice of Appeal to the Board of Patent Appeals and Interferences was filed by Appellants (dated 19 March 2004) in response to the Final Office Action dated 20 October 2003.

All amendments were entered for the purposes of this Appeal.

V. SUMMARY OF THE INVENTION

Appellants' invention relates to composite pavement markings with improved wear resistance and other advantages. The composite pavement markings typically include a unitary retroreflective article attached to a base pavement marking. With the composite construction, different portions of the pavement marking are provided at different heights. The taller portions of the pavement marking may preferably offer some protection to the shorter portions from wear caused by vehicle traffic and/or snowplow blades. By combining two different retroreflective pavement markings to form the composite pavement markings of the present invention, a combination of features and properties is obtained that cannot be provided by either of the pavement markings alone.

VI. ISSUE(S) PRESENTED FOR REVIEW

A. Whether claims 1-9, 13-18, and 21-24 are patentable under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Wyckoff (5,108,218).

B. Whether claims 10-12 are patentable under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Jonnes (U.S. Patent No.3,785,719).

C. Whether claims 19-21 are patentable under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Wyckoff (5,108,218) and further in view of Jonnes (U.S. Patent No.3,785,719).

VII. GROUPING OF CLAIMS

For the purpose of this appeal, claims 1-9, 13, and 14 stand or fall together. Claims 10-12 stand or fall together. Claims 15-18 stand or fall together. Claims 19-20 stand or fall together. Claim 21 stands or falls alone. Claims 23-24 stand or fall together.

As applicable, separate arguments of patentability are provided to support the grouping of the claims as presented above.

VIII. ARGUMENT

A. Claims 1-9, 13-18, and 21-24 are patentable under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Wyckoff (5,108,218)

Claims 1-9, 13-18, and 21-24 stand rejected under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Wyckoff (5,108,218). Appellants respectfully disagree with this rejection and request review and reversal by the Board.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. *See, e.g., In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

Of the claims subject to this rejection, claims 1, 15 and 23 are independent claims. Each of the independent claims subject to this rejection will be addressed separately below because each of the independent claims defines a group of claims that stands or falls together for the purposes of this appeal.

Independent Claim 1

Independent claim 1 (along with its dependent claims 2-9, 13, and 14) recites, *inter alia*, a "first portion comprising a first portion width between first portion sides that is less than the marking width" and a "unitary retroreflective article attached to the first portion of the pavement marking . . . wherein the unitary retroreflective article has a width that is substantially equal to the first portion width."

Although it is asserted to the contrary in the Final Office Action, Eigenmann does not teach or suggest a "unitary retroreflective article" with "a width that is substantially equal to the first portion width." Applicants further submit herein that no legally sufficient suggestion or motivation has been identified that would lead one of ordinary skill in the art to modify the teachings of Eigenmann (alone or in view of Wyckoff) to reach the invention recited in claim 1.

The arguments presented in support of the rejection of claim 1 appear to equate the groups of retroreflective elements depicted in Figures 8-11 of Eigenmann with the recited "unitary retroreflective article" of claim 1. The rejection identifies the rails R of a different embodiment (the embodiment depicted in Figures 4 & 5 of Eigenmann) as corresponding to the "second portion surrounding the first portion on at least two opposing sides" recited in claim 1. The asserted combination of features from the different embodiments of Eigenmann is not, however, accompanied by the identification of any motivation or suggestion to combine these features from different embodiments in one pavement marking. As a result, Applicants submit that a proper *prima facie* case of obviousness has not been established.

In fact, Eigenmann itself teaches away from the proposed modification combining features from two different embodiments. The groups of retroreflective elements and the protective component R' depicted in Figures 8-11 are provided to raise the snowplow blades above the retroreflective elements E' (Eigenmann, col. 4, lines 55-60). The rejection, however, requires that the rails R from the pavement marking of Figures 4 & 5 (which are provided to raise

a snowplow blade above the retroreflective elements E) be combined with the protective component R'. In other words, the rejection requires one of ordinary skill in the art to provide two different structures on the same pavement marking when both of the structures perform the same function. In addition, no motivation or suggestion is identified as to why one of ordinary skill in the art would make the proposed combination.

For these reasons alone, Appellants submit that a proper *prima facie* case of obviousness has not been established with respect to claims 1-9, 13, and 14.

In addition, however, it is admitted in the Final Office Action that "Eigenmann discloses the claimed invention except for the unitary retroreflective article having a width that is substantially equal to the first portion width." (Final Office Action, p. 7, October 20, 2003). This admission is followed by an assertion that "[i]t would have been an obvious matter of design choice to change the size of the unitary retroreflective article to have a width substantially equal to the first portion since such a modification would have involved a mere change in the size of a component." That assertion, however, does not identify any specific feature or element of the pavement markings of Eigenmann that could be enlarged to meet the width requirement of claim 1.

The Final Office Action does include other assertions in an attempt to establish that Eigenmann teaches or suggests a composite pavement marking in accordance with the present invention. For example, the Office Action includes a dictionary definition of "unitary" followed by the assertion that the "retroreflective articles shown in Figures 7-10 [of Eigenmann] show the glass beads of the retroreflective elements as part of a unit." (Final Office Action, p. 9, October 20, 2003). No discussion is provided, however, as to how the retroreflective elements E' disclose or suggest a composite pavement marking that includes "a unitary retroreflective article attached to the first portion of the pavement marking . . . wherein the unitary retroreflective article has a width that is substantially equal to the first portion width" as recited in claim 1.

If the assertion is that each individual retroreflective element E' of the embodiment depicted in Figures 8-11 of Eigenmann could be enlarged to meet the width requirement of claim 1, then Appellants submit that such a modification goes far beyond a "mere change in the size of a component." As recited in Eigenmann, the retroreflective elements E' include "a sharply protruding dome or part-spherically shaped protruding portion and a generally flattened lower portion having reflectorized retrocollimating beads secured thereto." Eigenmann, col. 4, lines 30-33. The rejection has not identified how or why one of ordinary skill in the art could or would modify any one of the retroreflective elements E' such that it could have "a width that is substantially equal to the first portion width" as recited in claim 1. As a result, such a rejection would not meet the requirements for a *prima facie* case of obviousness.

If the assertion is that the protective structure R' and its associated retroreflective elements could be enlarged such that they have "a width that is substantially equal to the first portion width, then Appellants submit that a proper case of *prima facie* obviousness has not been established because, as discussed above, one of ordinary skill in the art would not be motivated to provide rails R in combination with the protective structure R' because both components provide the same function.

Appellants do note that it is asserted in the Advisory Action that Eigenmann "clearly shows that the retroreflective element covers the whole width of the first portion of the road marker (Figure 4). The retroreflective elements are present along the width of the marker and only between the second portion elements R." Appellants respectfully submit, however, that this assertion clearly contradicts the earlier admission that "Eigenmann discloses the claimed invention except for the unitary retroreflective article having a width that is substantially equal to the first portion width." (Final Office Action, p. 7, October 20, 2003). As such, Appellants submit that this new contradictory assertion should be disregarded.

Even if the new assertion is considered by the Board, the statement does not assert that Eigenmann teaches or suggests "a unitary retroreflective article attached to the first portion of the pavement marking . . . wherein the unitary retroreflective article has a width that is substantially equal to the first portion width" meeting the recitations of claim 1. Rather, the assertion merely identifies the area between the rails R as corresponding to the "unitary retroreflective article." That area is not, however, "a unitary retroreflective article attached to the first portion of the pavement marking" as recited in claim 1.

Finally, Appellants note that nowhere in the rejection is there any assertion that Wyckoff provides any teaching or suggestion to remedy the deficiencies of Eigenmann as discussed herein.

Because Eigenmann and Wyckoff, taken alone or together, do not teach or suggest a composite pavement marking as recited in claim 1, Appellants respectfully submit that a proper case of *prima facie* obviousness has not been established with respect to independent claim 1 and its dependent claims 2-9, 13, and 14 in view of Eigenmann and Wyckoff.

For at least the above reasons, Appellants respectfully submit that claims 1-9, 13, and 14 are nor rendered unpatentable over the asserted combination of Eigenmann and Wyckoff because the assertions made with respect to the teachings of Eigenmann are not supported by the reference itself. In addition, the Examiner has failed to show why or how one of ordinary skill in the art would modify Eigenmann in view of Wyckoff to reach the claimed invention. Review and reversal of this rejection by the Board are respectfully requested.

Independent claim 15

Independent claim 15 (along with its dependent claims 16-18, 21, and 22) recites, *inter alia*, a composite pavement marking that includes "a unitary retroreflective article attached to the first portion of the pavement marking." Claim 15 further recites that the composite

pavement marking includes "a plurality of discrete first portions surrounded by a second portion, each of the plurality of first portions comprising a discrete unitary retroreflective article attached thereto."

One example of a construction according to the principles of claim 15 is depicted in FIG. 8, where the discrete first portions 320 each include a discrete unitary retroreflective article 350 located therein. *See also,* Specification, p. 16, line 14 to p. 17, line 10.

Appellants submit that Eigenmann fails to teach or suggest a composite pavement marking as recited in claim 15. In fact, the Final Office Action includes an admission that "Eigenmann fails to disclose . . . a plurality of discrete first portions surrounded by a second portion where each of the plurality of first portions comprising (*sic*) a discrete unitary retroreflective article attached thereto . . . ." (Final Office Action, p. 6, October 20, 2003).

Furthermore, no discussion has been provided in support of this rejection that would identify how one of ordinary skill in the art would modify a pavement marking of Eigenmann to reach the composite pavement marking recited in independent claim 15. For example, no discussion is provided as to how or why one of ordinary skill in the art would attach a plurality of discrete unitary retroreflective articles to first portions of a pavement marking according to Eigenmann in view of Wyckoff.

Wyckoff itself discloses only a completely unitary pavement marking that includes structures molded therein that have different shapes. There is no discussion or suggestion that any of the structures may be provided as "a plurality of discrete first portions surrounded by a second portion, each of the plurality of first portions comprising a discrete unitary retroreflective article attached thereto" or even that any of the retroreflective structures may have different heights.

In view of the admission as to the teachings of Eigenmann, the absence of any teaching or suggestion of Wyckoff with respect to "discrete unitary retroreflective articles"

attached to a pavement marking, and the absence of any discussions addressing why or how one of ordinary skill in the art would modify Eigenmann in view of Wyckoff, Appellants respectfully submit that a proper case of *prima facie* obviousness with respect to claims 15-18, 21, and 22 has not been established.

For at least the above reasons, Appellants respectfully submit that claims 15-18, 21, and 22 are not rendered unpatentable over the asserted combination of Eigenmann and Wyckoff because the assertions made with respect to the teachings of Eigenmann are not supported by the reference itself. In addition, the Examiner has failed to show why or how one of ordinary skill in the art would provide "a plurality of discrete first portions surrounded by a second portion, each of the plurality of first portions comprising a discrete unitary retroreflective article attached thereto" as recited in independent claim 15. Appellants respectfully request review and reversal of the rejection of claims 15-18, 21, and 22 as obvious over Eigenmann in view of Wyckoff.

Independent Claim 23

Independent claim 23 (along with its dependent claim 24) recites, *inter alia*, a "first portion comprising a first portion width between first portion sides that less than the marking width" and a "unitary retroreflective article attached to the first portion of the pavement marking . . . wherein the unitary retroreflective article extends along substantially all of the marking length."

No assertion is provided in the Final Office Action or the Advisory Action that Eigenmann and Wyckoff, taken alone or together, teach or suggest the construction recited in claim 23. It is asserted in the Final Office Action that various limitations argued by Appellants are not recited in the claims, including the limitations quoted from claim 23. For example, it is asserted that "the features upon which applicant relies (i.e., the retroreflective elements extending

along the marking length of the roadway surface marking tape) are not recited in the rejected claims(s)." (Final Office Action, p. 9, October 20, 2003). That assertion, however, is clearly mistaken with respect to claim 23 which recites that "the unitary retroreflective article extends along substantially all of the marking length."

The Advisory Action does include a conclusory assertion that "Eigenmann teaches a marker where the retroreflective element extends substantially along the length of the marker (Figure 3)." That assertion does not, however, identify what feature of Eigenmann depicted in Figure 3 is the "unitary retroreflective article attached to the first portion of the pavement marking" as recited in claim 15.

If the unstated assertion is that each of the retroreflective elements E is a "unitary retroreflective article" as recited in claim 15, then none of the retroreflective articles E meets the requirement that it "extends along substantially all of the marking length" as recited in claim 15. If the unstated assertion is that the area of the pavement marking between the rails R constitutes the "unitary retroreflective article" Appellants note that there is no "unitary retroreflective article" that is attached to the pavement marking or that extends the length of the pavement marking as is discussed herein with respect to claim 1.

For at least the above reasons, Appellants respectfully submit that claims 23 and 24 are not rendered unpatentable over the asserted combination of Eigenmann and Wyckoff because the assertions made with respect to the teachings of Eigenmann are not supported by the reference itself. In addition, the Examiner has failed to show why or how one of ordinary skill in the art would provide a "unitary retroreflective article attached to the first portion of the pavement marking . . . wherein the unitary retroreflective article extends along substantially all of the marking length" as recited in independent claim 23. Review and reversal by the Board of this rejection of claims 23 and 24 are, therefore respectfully requested.

B. Claims 10-12 are patentable over Eigenmann (U.S. Patent No. 4,129,673) in view of Jonnes (U.S. Patent No.3,785,719) under 35 U.S.C. § 103(a).

Claims 10-12 stand rejected under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Jonnes (U.S. Patent No.3,785,719). Appellants respectfully disagree and request review and reversal of this rejection by the Board.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. *See, e.g., In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991).

Appellants note that claims 10-12 depend from claim 1 (either directly or ultimately). Appellants further note that the rejection of claims 10-12 over Eigenmann in view of Jonnes does not include any assertions that Jonnes addresses the deficiencies of Eigenmann with respect to claim 1. As a result, all of the arguments presented above with respect to the patentability of claim 1 over Eigenmann under 35 U.S.C. § 103 apply to the rejection of claims 10-12 as well and are repeated here.

Further, Appellants note that the rejection of claims 10-12 does not contain any assertion that Jonnes provides any teaching or suggestion to remedy the deficiencies of Eigenmann with respect to claim 1 as discussed herein.

In addition to the basic deficiencies of the rejection of claims 10-12 as discussed above, Appellants submit that no legally sufficient motivation to combine Eigenmann with Jonnes has been identified that would support a *prima facie* case of obviousness of claims 10-12.

Eigenmann teaches a roadway surface marking tape material including components (rails R in Figure 3) whose sole purpose is to raise snowplow blades over the

retroreflective elements in between the rails, thus preventing destruction of the retroreflective elements by the snowplow (Eigenmann, Abstract). The rails R are disclosed as being manufactured of metal or "extruded plastics resisting to wear, friction and stresses . . . ." (Eigenmann, col. 3, lines 63-65). The teachings of Eigenmann indicate that for the rails to work, they should not deform.

Jonnes, conversely, teaches a roadway lane delineator including an integrally formed base portion and reflector portion that forms a retroreflective structure (*see, e.g.,* element 15 in Figure 1), wherein the retroreflective structure elastically deforms when engaged by a vehicle passing over the structure (Jonnes, column 1, lines 52-59 and column 1, line 65 to column 2, line 5). Jonnes does teach a construction that is resistant to plowing in Figures 6 & 7. "The ribs 39 at the sides and between the recesses 31-34 protect the retro-reflective elements against abrasion by the tires of vehicles traveling on the roadway as well as from the plow blade." (Jonnes, col. 3, lines 54-57). The ribs 39 do not include retro-reflective elements.

In other words, Jonnes teaches two approaches to providing snow-plow resistant retroreflective pavement markings. In the first approach, the structures including retroreflective elements are designed to elastically deform and include retroreflective particles attached thereto. In the second approach, the pavement marking includes ribs 39 analogous to the rails R of Eigenmann. The ribs 39 are designed to protect the underlying retroreflective structures by holding the snowplow blade above the retroreflective elements (although some elastically deformable structures may still be included between ribs 39). Jonnes does not teach or suggest that the ribs 39 used to support snowplow blades include retroreflective elements located thereon.

Thus, any assertion that one of ordinary skill in the art would provide retroreflective elements on the rails R of Eigenmann based on the teachings of Jonnes is not supported by the teachings of Jonnes and, thus, cannot form the basis for a proper case of the *prima facie* obviousness. As noted above, Jonnes, like Eigenmann, teaches support structures

designed to hold a snowplow blade above retroreflective structures. Also like Eigenmann, the support structures of Jonnes do not, themselves, include retroreflective elements as recited in claims 10-12. In other words, Jonnes reinforces the teachings of Eigenmann that support structures (rails R of Eigenmann and ribs 39 of Jonnes) do not themselves include retroreflective elements.

In view of the above, any assertion that providing retroreflective elements on the flexible structures of Jonnes would motivate one of ordinary skill in the art to apply retroreflective elements to the rails R of Eigenmann is not supported by the teachings of the cited references. For that reason alone, Appellants submit that a *prima facie* case of obviousness has not been established for claims 10-12 in view of the asserted combination of Eigenmann and Jonnes.

For at least the above reasons, Appellants respectfully submit that claims 10-12 are not rendered unpatentable over the asserted combination of Eigenmann and Jonnes because the assertions made with respect to the teachings of Eigenmann are not supported by the reference itself. In addition, the Examiner has failed to show why one of ordinary skill in the art would provide retroreflective particles on the rails of Eigenmann. Review and reversal by the Board of this rejection are respectfully requested.

C. Claims 19-21 are patentable under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Wyckoff (5,108,218) and further in view of Jonnes (U.S. Patent No.3,785,719) under 35 U.S.C. §103(a)

Claims 19-21 stand rejected under 35 U.S.C. §103(a) over Eigenmann (U.S. Patent No. 4,129,673) in view of Wyckoff (5,108,218) and further in view of Jonnes (U.S. Patent No.3,785,719). Appellants respectfully disagree with this rejection and request review and reversal by the Board.

In the Final Office Action this rejection begins with: "Eigenmann, as modified by Wyckoff. . . ." but provides no discussion as to how or why Eigenmann would be modified by the teachings of Wyckoff. In the response filed on September 15, 2003, Appellants requested that the Examiner provide some discussion as to how Eigenmann would be modified by Wyckoff and the asserted motivation that would lead one of ordinary skill in the art to make the proposed modification(s). No such discussions were provided in the Advisory Action.

For that reason alone, Appellants submit that the requirements for a proper case of *prima facie* obviousness have not been met and this rejection should be reversed.

In the interests of a complete record, however, Appellants respectfully submit that one of ordinary skill in the art would not be motivated to combine the teachings of Eigenmann with those of Wyckoff, and further in view of Jonnes, and any such combination may only occur through impermissible hindsight reconstruction.

Claims 19-21 all depend directly or ultimately from independent claim 15. That claim recites, *inter alia*, "a first portion" and "a unitary retroreflective article attached to the first portion of the pavement marking." In addition, claim 15 also recites "a plurality of discrete first portions surrounded by a second portion, each of the plurality of first portions comprising a discrete unitary retroreflective article attached thereto." One example of such a construction is depicted in FIG. 8, where the discrete first portions 320 each include a discrete unitary retroreflective article 350 located therein. *See also,* Specification, p. 16, line 14 to p. 17, line 10.

Appellants submit that Eigenmann fails to teach or suggest a composite pavement marking as recited in claim 15 and, furthermore, that no assertions have been made that Wyckoff and/or Jonnes address the deficiencies of Eigenmann with respect to claim 15. In fact, the Final Office Action includes an admission that "Eigenmann fails to disclose . . . a plurality of discrete first portions surrounded by a second portion where each of the plurality of first portions

comprising (*sic*) a discrete unitary retroreflective article attached thereto . . . ." (Final Office Action, p. 6, October 20, 2003).

Furthermore, no discussion has been provided in support of this rejection that would identify how one of ordinary skill in the art would modify a pavement marking of Eigenmann to reach the composite pavement marking recited in independent claim 15. For example, no discussion is provided as to how or why one of ordinary skill in the art would attach a plurality of discrete unitary retroreflective articles to first portions of a pavement marking according to Eigenmann in view of Wyckoff.

Wyckoff itself discloses only a completely unitary pavement marking that includes structures molded therein that have different shapes. There is no discussion or suggestion that any of the structures may be provided as "a plurality of discrete first portions surrounded by a second portion, each of the plurality of first portions comprising a discrete unitary retroreflective article attached thereto" or even that any of the retroreflective structures may have different heights.

In view of the admission as to the teachings of Eigenmann, the absence of any teaching or suggestion of Wyckoff (and/or Jonnes) with respect to "discrete unitary retroreflective articles" attached to a pavement marking, and the absence of any discussions addressing why or how one of ordinary skill in the art would modify Eigenmann in view of Wyckoff or Jonnes to reach the invention of claim 15, Appellants respectfully submit that a proper case of *prima facie* obviousness with respect to claim 15 (and, thus, claims 19-21, the subject of the instant rejection) has not been established.

Further arguments as to the patentability of claims 19-20 in view of this specific rejection will be discussed below separately from the patentability of claim 21 because, as noted in the grouping of claims, claims 19-20 stand or fall together and claim 21 stands or falls alone for the purposes of this appeal.

Claims 19-20

As for any assertions that, in view of Jonnes, one of ordinary skill in the art would be motivated to apply retroreflective elements to the rails R of Eigenmann as asserted in support of the rejection of claim 19 (and, thus claim 20), Appellants note that Eigenmann teaches a roadway surface marking tape material including components (rails R in Figure 3) whose sole purpose is to raise snowplow blades over the retroreflective elements in between the rails, thus preventing destruction of the retroreflective elements by the snowplow (Eigenmann, Abstract). The rails R are disclosed as being manufactured of metal or "extruded plastics resisting to wear, friction and stresses . . . ." (Eigenmann, col. 3, lines 63-65). The teachings of Eigenmann indicate that for the rails to work, they should not deform.

Jonnes, conversely, teaches a roadway lane delineator including an integrally formed base portion and reflector portion that forms a retroreflective structure (*see, e.g.,* element 15 in Figure 1), wherein the retroreflective structure elastically deforms when engaged by a vehicle passing over the structure (Jonnes, column 1, lines 52-59 and column 1, line 65 to column 2, line 5). Jonnes does teach a construction that is resistant to plowing in Figures 6 & 7. "The ribs 39 at the sides and between the recesses 31-34 protect the retroreflective elements against abrasion by the tires of vehicles traveling on the roadway as well as from the plow blade." (Jonnes, col. 3, lines 54-57). The ribs 39 do not include retro-reflective elements.

In other words, Jonnes teaches two approaches to providing snow-plow resistant retroreflective pavement markings. In the first approach, the structures including retroreflective elements are designed to elastically deform and include retroreflective particles attached thereto. In the second approach, the pavement marking includes ribs 39 analogous to the rails R of Eigenmann. The ribs 39 are designed to protect the underlying retroreflective structures by holding the snowplow blade above the retroreflective elements (although some elastically deformable structures may still be included between the ribs 39). Jonnes does not teach or

suggest that the ribs 39 used to support snowplow blades include retroreflective elements located thereon.

Thus, any assertion that one of ordinary skill in the art would provide retroreflective elements on the rails R of Eigenmann based on the teachings of Jonnes is not supported by the teachings of Jonnes and, thus, cannot form the basis for a proper case of the *prima facie* obviousness. As noted above, Jonnes, like Eigenmann, teaches support structures designed to hold a snowplow blade above retroreflective structures. Also like Eigenmann, the support structures of Jonnes do not, themselves, include retroreflective elements as recited in claims 19 and 20. In other words, Jonnes reinforces the teachings of Eigenmann that support structures (rails R of Eigenmann and ribs 39 of Jonnes) do not themselves include retroreflective elements.

In view of the above, any assertion that providing retroreflective elements on the flexible structures of Jonnes would motivate one of ordinary skill in the art to apply retroreflective elements to the rails R of Eigenmann is not supported by the teachings of the cited references. For that reason alone, Appellants submit that a *prima facie* case of obviousness has not been established for claims 19-20 in view of the asserted combination of Eigenmann and Jonnes. Furthermore, no assertions have been made, nor does Wyckoff actually teach or suggest anything that remedies the basic deficiencies of the asserted combination of Eigenmann as modified by Jonnes.

For at least the above reasons, Appellants respectfully submit that claims 19-20 are not rendered unpatentable over the asserted combination of Eigenmann, Wyckoff, and Jonnes because the assertions made with respect to the teachings of Eigenmann are not supported by the reference itself. In addition, the Examiner has failed to show why one of ordinary skill in the art would provide retroreflective particles on the rails of Eigenmann in view of Wyckoff and Jonnes.

As a result, review and reversal by the Board of the rejection of claims 19-20 are respectfully requested.

Claim 21

With respect to claim 21, Appellants note that the rejection as presented in the Final Office Action did not discuss, in any manner, how the cited references teach or suggest the use of two colors as recited in claim 21.

In support of this rejection, it is asserted that "Wyckoff teaches a pavement marker mad wit (*sic*) intermediate segments that display a bright or colored appearance when compared to the retroreflective segments (Column 6, lines 2-4)." (Advisory Action, p. 3, March 17, 2004). The cited portion of Wyckoff, however, reads as follows: "the intermediate segments presenting a daylight-bright or colored appearance to the marker strip between duller sets of beaded retroreflective segments."

In other words, Wyckoff does not teach or suggest a pavement marker that includes a first color and a second color that contrasts with the first color as recited in claim 21. Rather, Wyckoff teaches only that the retroreflective portions have "duller" appearance than the portions that do not include retroreflective beads (not that they a have a different color). Furthermore, Appellants note that no assertions have been made as to the location of the different colors on the unitary retroreflective articles and the second portion of the composite pavement marking as recited in claim 21.

As a result, Appellants respectfully submit that the rejection of claim 21 over the combination of Eigenmann in view of Wyckoff and Jonnes does not meet the requirements for a proper *prima facie* case of obviousness.

For at least the above reasons, Appellants respectfully submit that claim 21 is not rendered unpatentable over the asserted combination of Eigenmann, Wyckoff, and Jonnes

because the assertions made with respect to the teachings of Eigenmann are not supported by the reference itself. In addition, the Examiner has failed to show why or how one of ordinary skill in the art would provide two different colors on a pavement marking in view of Eigenmann, Wyckoff, and Jonnes. As a result, review and reversal by the Board of the rejection of claim 21 are respectfully requested.

C. Summary

For the foregoing reasons, Appellants respectfully request that the Board review and reverse the rejections of claims 1-24 as discussed herein and that notification of the allowance of these claims be issued.

Respectfully submitted,

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APPENDIX I.

Serial No.: 09/929,417

Docket No.: 55090US002

Claims 1-31 are provided below.

1. A composite pavement marking having a marking length and a marking width transverse to the marking length, the marking width defined by marking sides extending along the marking length, wherein the pavement marking further includes a bottom extending along the marking length and marking width, the pavement marking comprising:

a first portion comprising a first portion width between first portion sides that is less than the marking width;

a unitary retroreflective article attached to the first portion of the pavement marking, wherein a first portion height is defined by the distance between a top surface of the unitary retroreflective article and the bottom of the pavement marking, and wherein the unitary retroreflective article has a width that is substantially equal to the first portion width; and

a second portion surrounding the first portion on at least two opposing sides, wherein the second portion comprises a second portion height above the bottom of the pavement marking that is different than the first portion height.

2. The composite pavement marking of claim 1, wherein the second portion height is greater than the first portion height.

3. The composite pavement marking of claim 1, wherein the unitary retroreflective article and the first portion extend along substantially all of the marking length.

4. The composite pavement marking of claim 1, wherein the first portion comprises a plurality of ridges having a ridge height above the bottom of the pavement marking.

5. The composite pavement marking of claim 4, wherein the ridges extend across the first portion width.

6. The composite pavement marking of claim 4, wherein the ridge height is equivalent to the second portion height.

7. The composite pavement marking of claim 1, further comprising a base pavement marking, wherein the second portions of the composite pavement marking are formed in the base pavement marking.

8. The composite pavement marking of claim 7, wherein the unitary retroreflective article is attached to the base pavement marking.

9. The composite pavement marking of claim 1, wherein the unitary retroreflective article is adhesively attached to the first portion of the pavement marking.

10. The composite pavement marking of claim 1, wherein the second portion comprises a plurality of retroreflective elements.

11. The composite pavement marking of claim 10, wherein at least some of the plurality of retroreflective elements are attached to a plurality of protrusions extending above and separated by a valley area within the second portion, wherein the height of the plurality of protrusions above the bottom of the pavement marking defines the second portion height.

12. The composite pavement marking of claim 11, wherein the valley area in the second portion defines a valley height above the bottom of the pavement marking, and further wherein the valley height of the second portion is about equal to or less than the first portion height.

13. The composite pavement marking of claim 1, wherein the unitary retroreflective article exhibits a first color and the second portion of the pavement marking exhibits a second color that contrasts with the first color.

14. The composite pavement marking of claim 1, wherein the unitary retroreflective article and the second portion of the pavement marking exhibit a uniformly lightly colored appearance.

15. A composite pavement marking having a marking length and a marking width transverse to the marking length, the marking width defined by marking sides extending along the marking length, wherein the pavement marking further includes a bottom extending along the marking length and marking
width, the pavement marking comprising:

a first portion comprising a first portion width between first portion sides that is less than the marking width;

a unitary retroreflective article attached to the first portion of the pavement marking, wherein a first portion height is defined by the distance between a top surface of the unitary retroreflective article and the bottom of the pavement marking; and

a second portion surrounding the first portion on at least two opposing sides, wherein the second portion comprises a second portion height above the bottom of the pavement marking that is different than the first portion height, and further comprising a plurality of discrete first portions

surrounded by a second portion, each of the plurality of first portions comprising a discrete unitary retroreflective article attached thereto.

16. The composite pavement marking of claim 15, further comprising a base sheet substantially coextensive with the marking length and the marking width, wherein the unitary retroreflective article within each of the plurality of first portions and the second portions are attached to the base sheet.

17. The composite pavement marking of claim 15, wherein each of the first portions are defined by voids formed through the second portion.

18. The composite pavement marking of claim 15, wherein the second portion height is greater than the first portion height.

19. The composite pavement marking of claim 15, wherein the second portion comprises a plurality of retroreflective elements.

20. The composite pavement marking of claim 19, wherein at least some of the plurality of retroreflective elements are attached to a plurality of protrusions extending above and separated by a valley area within the second portion, wherein the height of the plurality of protrusions above the bottom of the pavement marking defines the second portion height.

21. The composite pavement marking of claim 15, wherein the unitary retroreflective articles exhibit a first color and the second portion of the pavement marking exhibits a second color that contrasts with the first color.

22. The composite pavement marking of claim 15, wherein the unitary retroreflective articles and the second portion of the pavement marking exhibit a uniformly lightly colored appearance.

23. A composite pavement marking having a marking length and a marking width transverse to the marking length, the marking width defined by marking sides extending along the marking length, wherein the pavement marking further includes a bottom extending along the marking length and marking width, the pavement marking comprising:

a first portion comprising a first portion width between first portion sides that is less than the marking width, the first portion extending along substantially all of the marking length;

a unitary retroreflective article attached to the first portion of the pavement marking, wherein a first portion height is defined by the distance between a top surface of the unitary retroreflective article and the bottom of the pavement marking, and further wherein the unitary retroreflective article extends along substantially all of the marking length; and

a second portion surrounding the first portion on two opposing sides, wherein the second portion comprises a second portion height above the bottom of the pavement marking that is greater than the first portion height.

24. The composite pavement marking of claim 23, wherein the unitary retroreflective article is adhesively attached to the first portion of the pavement marking.

25. A method of manufacturing a composite pavement marking having a marking length and a marking width transverse to the marking length, the marking width defined by marking sides extending along the marking length, wherein the pavement marking further includes a bottom extending along the marking length and marking width, the method comprising:

providing a retroreflective base pavement marking; and

attaching a unitary retroreflective article to the base pavement marking;

wherein the base pavement marking and the unitary retroreflective article define a first portion and a second portion surrounding the first portion on at least two opposing sides; the first portion comprising a first portion height defined by the distance between a top surface of the unitary retroreflective article and the bottom of the pavement marking, and the second portion comprising a second portion height above the bottom of the pavement marking that is different than the first portion height.

26. A method according to claim 25, wherein the second portion height is greater than the first portion height.

27. A method according to claim 25, wherein the unitary retroreflective article is adhesively attached to the base pavement marking.

28. A method according to claim 25, wherein the unitary retroreflective article and the base pavement marking each comprise a length coextensive with the marking length.

29. A method according to claim 25, wherein the base pavement marking comprises a plurality of ridges having a ridge height above the bottom of the pavement marking, and further wherein attaching the unitary retroreflective article comprises attaching the unitary retroreflective article over the plurality of ridges.

30. A method according to claim 29, wherein the ridge height is equivalent to the second portion height.

31. A method according to claim 25, wherein the base pavement marking comprises a plurality of retroreflective elements attached to a plurality of protrusions extending above and separated by a valley area within the second portion of the pavement marking, wherein the height of the plurality of protrusions above the bottom of the pavement marking defines the second portion height.

APPENDIX II.

Serial No.: 09/929,417

Docket No.: 55090US002

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1. Eigenmann (U.S. Patent No. 4,129,673)
2. Jonnes (U.S. Patent No. 3,785,719)
3. Wyckoff (5,108,218)